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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 03FKWO23	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR 2004/001727	International filing date (<i>day/month/year</i>) 13 July 2004 (13.07.2004)	Priority Date (<i>day/month/year</i>) 21 July 2003 (21.07.2003)
International Patent Classification (IPC) or national classification and IPC IPC⁷: F24C 15/20		
Applicant LG ELECTRONICS INC. ET AL		

1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I. ☒ Basis of the opinion
- II. ☐ Priority
- III. ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV. ☐ Lack of unity of invention
- V. ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI. ☐ Certain documents cited
- VII. ☐ Certain defects in the international application
- VIII. ☐ Certain observations on the international application

Date of submission of the demand 13.01.2005	Date of completion of this report 21 October 2005 (21.10.2005)
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer HOLZWEBER G. Telephone No. 1/53424/461

Form PCT/IPEA/409 (cover sheet) (July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR 2004/001727

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement) under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____.

☐ the claims, Nos. _____.

☐ the drawings, sheets/fig _____.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

Form PCT/IPEA/409 (Box I) (July 1998))

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/KR 2004/001727

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement			
I. Statement			
Novelty (N)	Claims 1-29		YES
	Claims ----		NO
Inventive step (IS)	Claims 1-10, 19-24, 26-29		YES
	Claims 11-18, 25		NO
Industrial applicability (IA)	Claims 1-29		YES
	Claims ----		NO
Citations and explanations (Rule 70.7)			
<p>Reference is made to the following documents.</p> <p>D1: US 6,344,637 B2 (LG ELECTRONIC INC.) 5 February 2002 D2: KR 97-44154 U (LG ELECTRONIC INC.) 31 July 1997 D3: JP 57-201421 U (TOKYO SHIBAURU CORP.) 22 December 1982 D4: US 5,918,589 A (WHIRLPOOL CORP.) 6 July 1999</p> <p>1. Novelty The present invention includes features which are not disclosed in D1-D4. Therefore, the subject matter of claims 1-29 is considered to be novel.</p> <p>2. Inventive Step 1) Claims 11, 12 and 14 relate to an air flow system in a microwave oven, comprising a first intake port formed at an upper side of a door of the microwave oven, a front outlet port formed at a front lower side thereof and a ventilation fan assembly installed at an electronic equipment chamber. Said air flow system in a microwave oven of claims 11, 12 and 14 is similar to the air flow system in a microwave oven of D1 which includes a suction grille, an exhaust grille and a fan assembly.</p> <p>2) Claim 13 is characterized in that the outlet port is formed through a front plate of the oven of claim 11 and D4 disclosed the row of vent (26) formed through a front plate of the oven. There is a difference in the location between the port of claim 13 and vent of D4 but said difference in the location between the port of claim 13 and vent of D4 but said difference is trivial to a person skilled in the art since a person skilled in the art would select the location of a port straight forwardly in accordance with circumstances.</p> <p>3) Claims 15 and 16 include a base plate having a lower outlet port in addition to the feature of claim 11. However said base plate is similar to the base plate having the lower outlet port (17') of D2.</p>			

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V (page 1)

4) Claim 17 includes a second intake port at a rear side of the electronic equipment in addition to the feature of claim 11. However said intake port is a general means in the field of ventilation system of oven as shown in D3 and D4.

5) Claims 18 and 25 relate to an air flow system in a microwave oven comprising an intake port at a rear side of the electronic equipment chamber, a lower outlet port and a ventilation fan assembly. Said air flow system in a microwave oven of claims 18 and 25 is similar to the air flow system in a microwave oven of D3 which includes a rear intake port, a lower outlet port and a fan assembly.

Therefore, the subject matter of claims 11-18 and 25 is considered to lack an inventive step.

3. Industrial applicability

Since the present invention relates to an air flow system in a microwave, the subject matter of claims 1-29 is considered to be industrially applicable.